



DECLARATION

I, Lae Bong PARK, hereby certify that I am well acquainted with English and that the attached document is a true English translation of Korean Patent Application No. 10-2001-01000, completed to the best of my knowledge.

Attachments

- 1) A certified copy of Korean Patent Application No. 10-2001-01000
- 2) English translation thereof

A handwritten signature in black ink, appearing to read "Lae Bong PARK", written over a horizontal line.

Signature: Lae Bong PARK

**ABSTRACT****Summary**

The present invention relates to a method of storing data in a personal data assistant. A data storing method of the present invention comprises: preparing data in a first format; selecting a second data format to which the first format of the prepared data is converted before being stored; writing field information needed for changing to the second data format; and changing the first format to the second format based on the written field information and storing the format-converted data. One of the present methods executes an arbitrary application program embedded in a PDA, converts input format of data, which is matched with the executed application program, to other format adequate to another application program that is chosen by a user and stores the format-converted data in said another program, whereby the user need not re-enter in an application program the data entered previously in another application program and possible errors due to repetitive data entering can be minimized. In addition, user's convenience is remarkably improved.

Key Figure

Figure 2

Key Words

Personal Data Assistant (PDA), link program, data input window, application program, repetitive input

SPECIFICATION

Title

Method Of Storing Data In a Personal Information Terminal

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Brief Description Of The Drawings

Fig. 1 shows a conventional personal data assistant (PDA);

Fig. 2 is a block diagram of a PDA according to the present invention is embedded;

10 Fig. 3 is a schematic diagram of various application programs to be linked each other through a link program that are stored in a PDA according to the present invention;

Fig. 4 is a flow chart of a data storing method in a PDA according to the present invention; and

15 Figs. 5 to 6 are exemplary screens displayed on a PDA according to embodiments of the present invention.

Major Elements In Drawings

| | |
|------------------|--|
| 10: CPU | 11: touch screen |
| 20 12: key pad | 20 ₁ ~20 _N : application program |
| 30: link program | |

Background Of The Invention

The present invention relates to a method of storing data
25 in a plurality of application programs embedded in a personal information terminal, more particularly, to a method for simply converting input data, entered in a format suitable for one of a plurality of application programs embedded in a personal data assistant (PDA), to have different format suitable for another
30 application program chosen by a user, and storing the format-converted data in said another application program.

A PDA, which is being commercialized lately, is a small portable information terminal with a communication function as well as many functions of a computer and an electronic pocket
5 book. A PDA equips with a touch screen as an input/output device which displays many icons associated with various embedded application programs as shown in Fig. 1.

A PDA has various application programs embedded in it. Examples of the basic embedded application programs are
10 'Notepad', 'Scheduler', and so on.

When using a PDA, a user carrying the PDA chooses an application program suitable to data to enter and store, and executes it by tapping a related icon displayed on a touch screen. And, he or she enters desired data in the PDA through
15 the executed application program, then, the entered data is formatted to suitable data for the application program and is then stored in a corresponding file.

For example, a user carrying a PDA taps a 'Notepad' icon displayed on a touch screen to execute the 'Notepad' program.
20 After execution of the 'Notepad' program, a user enters or notes down private information or confirms a previously-stored notes through the 'Notepad' program.

In addition, if a user wants to enter a private schedule event consisting of date, time, location, and agenda, or to
25 check schedule events stored previously, he or she taps a 'Scheduler' icon to execute the 'Scheduler' program. Then, it becomes possible to enter a private schedule event or to confirm a stored schedule event through the running 'Scheduler' program.

While a user carrying a PDA enters private information
30 through a running program, e.g., 'Notepad', it may happen that he or she wants to manage the private information entered into the 'Notepad' program as a private schedule event. In this case,

the user has to execute the 'Scheduler' program and re-enter the previously-entered private information into the 'Scheduler' program in a format adequate to the 'Scheduler' program. Such a work is troublesome.

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Explanation Of The Invention

It is an object of the present invention to provide a method of storing data in a PDA terminal, which can convert a format of data entered suitably for an arbitrary executed
10 application program, one of embedded application programs in a PDA terminal, to other format suitable for another application program chosen by a user, and store the format-converted data in the another application program without data re-entering or additional program execution, thereby minimizing repetitions of
15 entering same private information.

A data storing method embedded in a personal data assistant according to the present invention is characterized in that it comprises the steps of: preparing data in a first format; selecting a second data format to which the first format of the
20 prepared data is converted before being stored; writing field information needed for changing to the second data format; and changing the first format to the second format based on the written field information and storing the format-converted data.

25 In order that the present invention may be fully understood, a preferred embodiment thereof will now be described with reference to the accompanying drawings.

Fig. 2 is a block diagram of a PDA in which a data storing method according to the present invention is embedded. The PDA
30 of Fig. 2 comprises a touch screen 11 displaying a plurality of icons associated with various embedded application programs and detecting user's tapping; a key pad 12 for receiving key inputs;

various application programs (APPs) 20x such as 'Notes' and 'Calendar'; a link program 30 for linking the APPs each other; and a CPU 10 executing an APP selected by a user and supervising all the elements to conduct an operation requested by a user.

5 The link program 30 conducts, as shown in Fig. 3, the conversion between data formats suitable to the 'Notepad' 20₁, the 'Scheduler' 20₂, the 'Contacts' APP 20₃, etc. For example, while a user is entering desired data through the executed 'Notepad' program 20₁, the link program 30 can conduct the
10 conversion of the entered desired data, e.g., unformatted private schedule data to be acceptable to the 'Scheduler' program 20₂. The briefly-described data storing method is explained below in detail.

Fig. 4 is a flow chart showing a preferable embodiment of a
15 data storing method embedded in a PDA.

In the condition that several icons related with various APPs 20₁-20_n have been displayed on the touch screen 11, if a user taps an arbitrary program, e.g., the 'Notepad' program 20₁ on the touch screen 11, the CPU 11 recognizes the tap of the
20 'Notepad' program 20₁ and executes the 'Notepad' program 20₁ (S10).

Accordingly, the user freely enters desired data in an input screen of the executed 'Notepad' program 20₁ through the touch screen 11, then, the 'Notepad' program 20₁ adapts the
25 entered data to its DB structure and stores the adapted data in its DB (S11).

In the meantime, if the user wants the contents of the entered data in the 'Notepad' program 20₁ to be also stored in other APP, e.g., the 'Scheduler' program 20₂, he or she selects
30 the link program or enters a corresponding key for format conversion. If the link program 30 is selected (S12), the CPU 10 detects the selection of the link program 30 and executes the

link program 30.

Accordingly, the link program 30 outputs a menu screen, as shown in Fig. 5, for user's selection of a target APP in which the stored data in the 'Notepad' program is to be stored after appropriate format conversion (S13). The menu screen may contain icons associated with target APP candidates, e.g., 'Contacts' and 'Scheduler' which will receive the same contents of the entered private information into the 'Notepad' program.

Afterwards, if the user chooses a target APP, e.g., the 'Scheduler' program through the appropriate selecting method (S14), the link program 30 presents in the touch screen 11 an information input window for data fields necessary for storing data in a format suitable for the 'Scheduler' program (S15). Which information input window is activated for a certain target APP is pre-assigned.

The information input window for the 'Scheduler' program contains fields of 'date', 'time', 'location' and 'agenda'. Data entered in each field of the information input window is temporally stored by the link program 30 (S16).

The link program 30 conducts linking operation with the 'Scheduler' program to convert the temporally-stored data to be matched with format of a user-designated program, i.e., the 'Scheduler' program. The format-converted data is then stored in the 'Scheduler' program (S17).

In the meantime, the CPU 10 keeps monitoring whether termination of the running 'Notepad' program is requested from the user, and it conducts a terminating process of the 'Notepad' program, if requested.

The link program 30 may retrieve the data entered in the 'Notepad' program selectively and automatically instead of using field information input window as above. In this embodiment, for example, a user enters a text or a memorandum in the 'Notepad'

program in such a manner that the written order of its
constituting words or phrases is matched with field order of
other target APP. For example, a user enters delimiters in a
text or a memorandum before or behind each word or phrase
5 corresponding to respective field data such as 'date', 'time',
'location', 'agenda', etc., as shown in Fig. 6.

While the invention has been disclosed with respect to a
limited number of embodiments, those skilled in the art, having
the benefit of this disclosure, will appreciate numerous
10 modifications and variations therefrom. It is intended that the
appended claims cover all such modifications and variations as
fall within the true spirit and scope of the invention.

Effect Of The Invention

15 The above-explained method of storing data in a PDA in
accordance with the present invention executes an arbitrary
application program embedded in a PDA, converts input format of
data, which is matched with the executed application program, to
other format adequate to another application program that is
20 chosen by a user and stores the format-converted data in said
another program, whereby the user need not re-enter in an
application program the data entered previously in another
application program and possible errors due to repetitive data
entering can be minimized. In addition, user's convenience is
25 remarkably improved.

What is claimed is:

1. A method of storing data in a personal information
terminal, comprising the steps of:
30 preparing data in a first format;
selecting a second data format to which the first format of
the prepared data is converted before being stored;

writing field information needed for changing to the second data format; and

changing the first format to the second format based on the written field information and storing the format-converted data.

5 2. The method of claim 1, wherein the selecting step selects through menu item selection from a menu in which application programs except an application program adopting the first format are listed.

3. The method of claim 1, wherein the writing step receives
10 the field information, which is needed for changing to the second data format, through a data input window.

4. The method of claim 1, wherein the writing step selectively retrieves the field information, which is needed for changing to the second data format, from the prepared data of
15 the first format based on delimiters added to the prepared data.



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FIG. 1

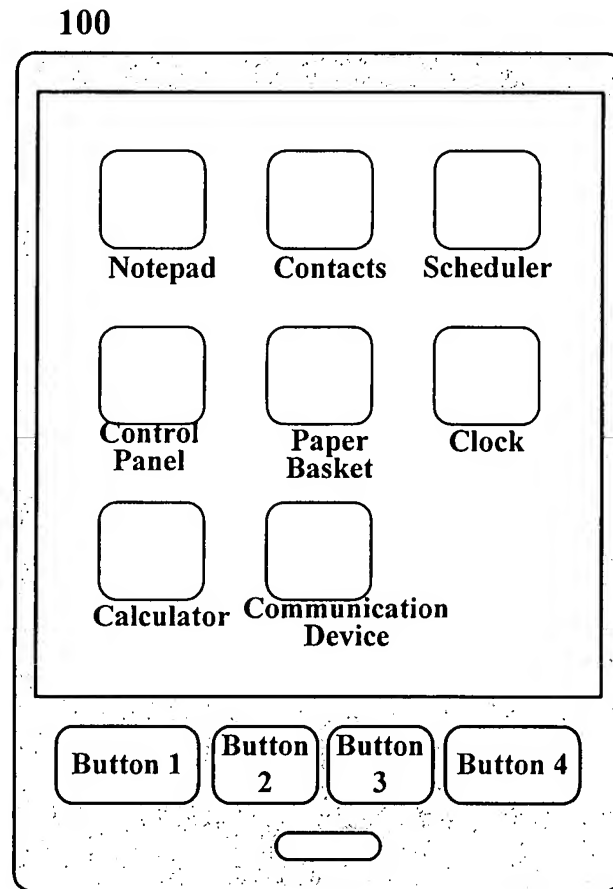


FIG. 2

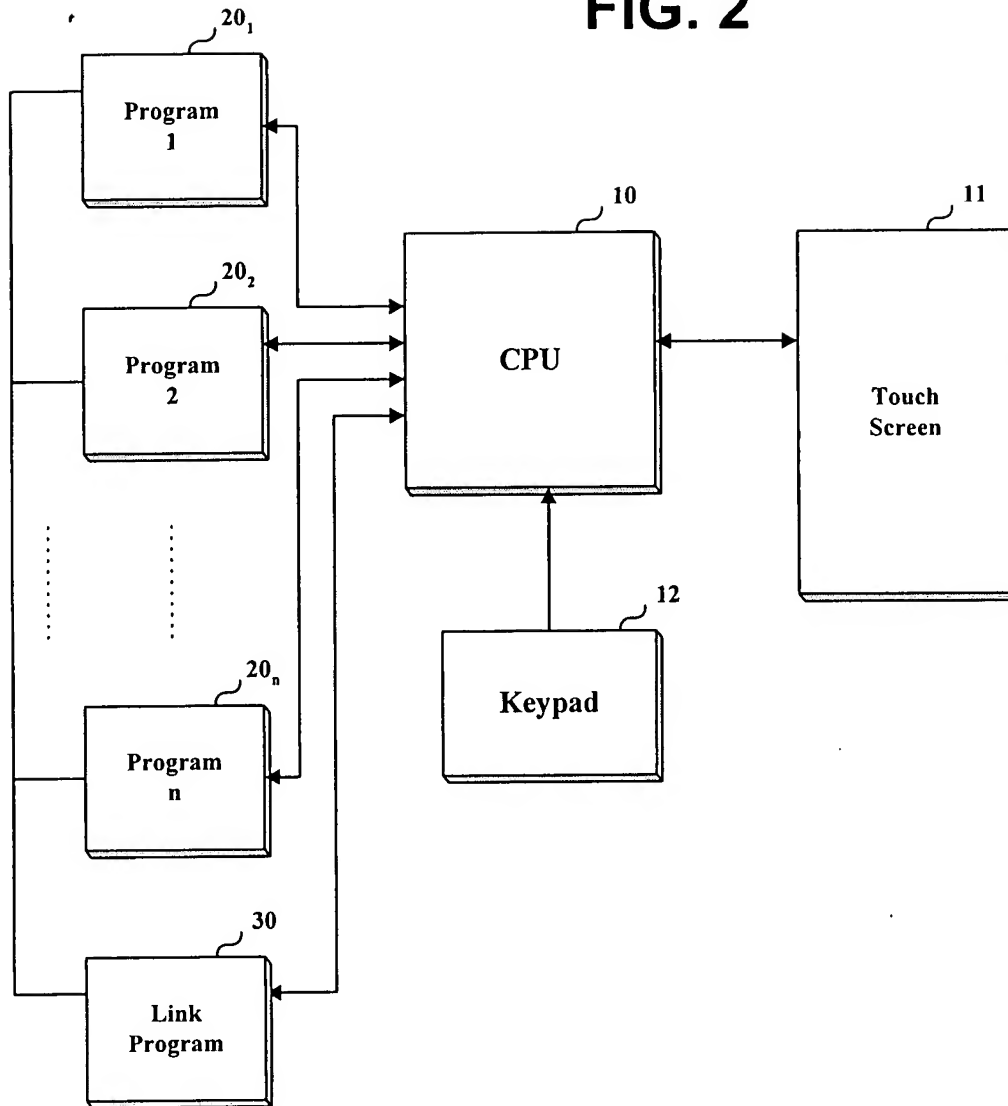


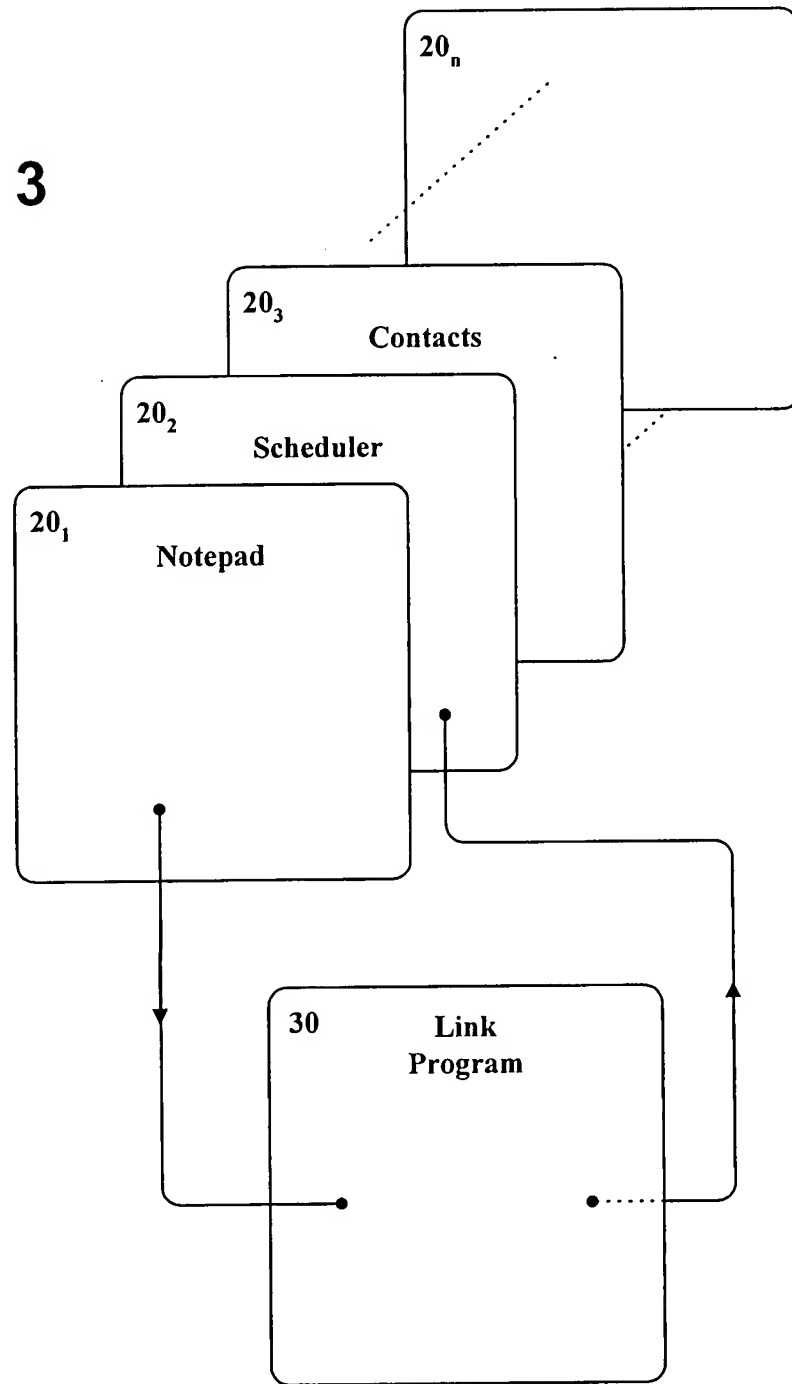
FIG. 3

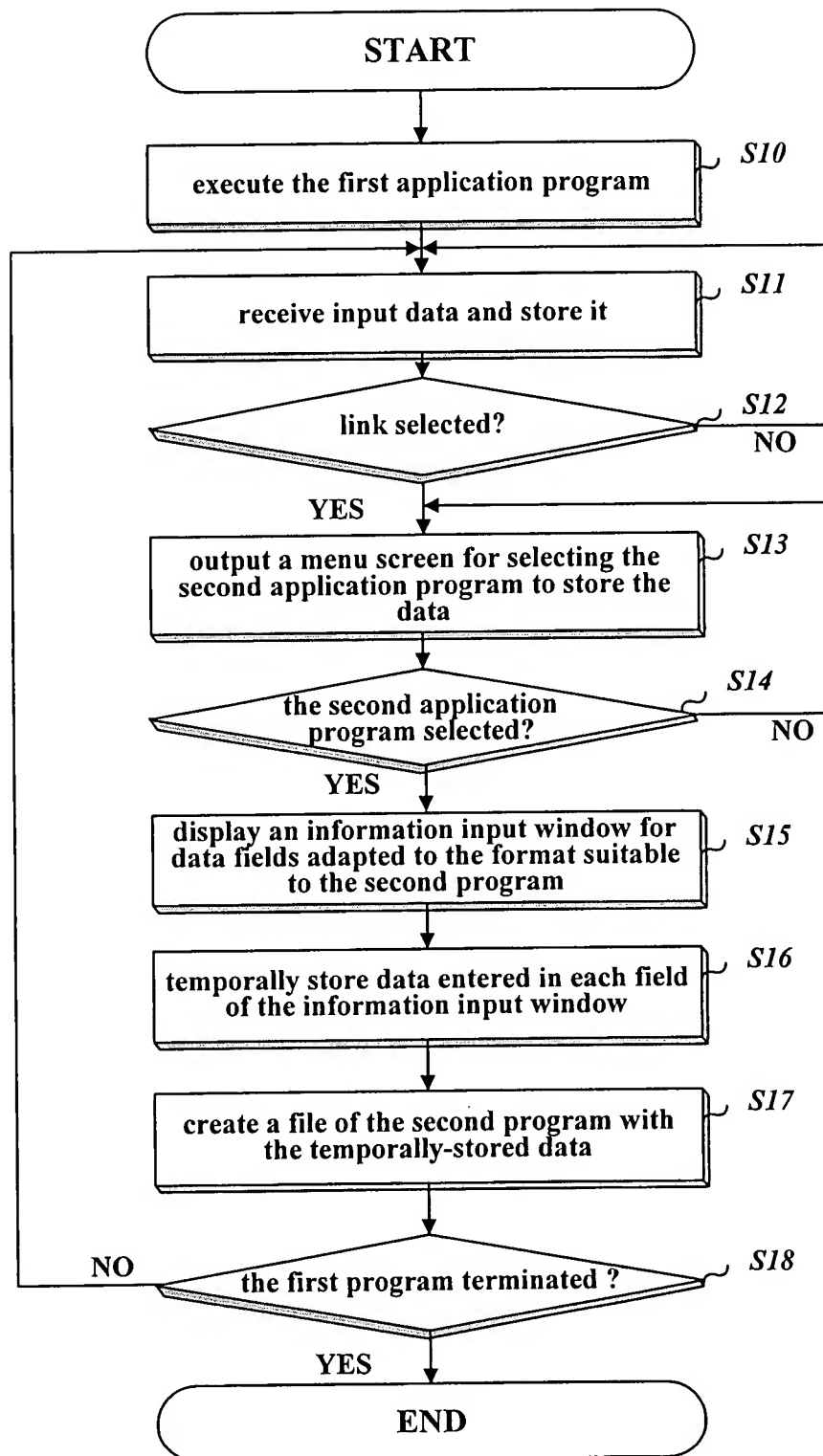
FIG. 4

FIG. 5

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Note #1

LG B/D, Kangnam at 15:00 on Dec. 30, 2001

Introduction of a brand-new PDA and Development Thereof

| Date | Time | Location |
|------|------|----------|
| | | |

Agenda

Program to store in: **Contacts** **Scheduler**

Button 1 **Button 2** **Button 3** **Button 4**

FIG. 6

100

Note #1

%/15:00/% */Dec. 30, 2001/*

&/LG B/D in Kangnam/&

****/Introduction of a brand-new PDA and Development Thereof/****

Program to store in: **Contacts** **Scheduler**

Button 1 **Button 2** **Button 3** **Button 4**